# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

JAS-ANZ BSCIC ISO 9001 REGISTERED


Job No.: CTCE/BBMP/W.No.10/SEC/WMM/Gradation/2012-13

02.03.2013

## GRADATION FOR WMM
## MORTH TABLE-400-11

**Client** : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

**Agency** : **M/s. Sri Ekadantha Constructions,** Bangalore.

**Name of Work** : Providing metalling and asphalting to C.Krishnappa Layout and Kempanna Layout in Ward No.10, BBMP, Bangalore.

**Reference** : AEE/VP/WO/358/2012-13 Dated: 05.03.2013

Date of Testing : 02.03.2013

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **25545**

| Is Sieve Size in mm | Weight Retained (gm) | Cumulative Weight Retained (gm) | Cumulative % of Retained | Cumulative % of Passing | Spec.Limits |
|---|---|---|---|---|---|
| 53 | 0 | 0 | 0 | 100 | 100 |
| 45 | 1042 | 1042 | 4.1 | 95.9 | 95-100 |
| 22.4 | 6987 | 8029 | 31.4 | 68.6 | 60-80 |
| 11.2 | 5120 | 13149 | 51.5 | 48.5 | 40-60 |
| 4.75 | 3150 | 16299 | 63.8 | 36.2 | 25-40 |
| 2.36 | 2105 | 18404 | 72.0 | 28.0 | 15-30 |
| 0.600 | 3521 | 21925 | 85.8 | 14.2 | 8-22 |
| 0.075 | 3410 | 25335 | 99.2 | 0.8 | 0-8 |

**Note:**

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing.

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Bangalore - 560 079

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## BITUMEN CONTENT DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

### AASHTO T 164 & AASHTO T 30

| | |
|---|---|
| CLIENT | **Asst. Executive Engineer,** Vidyaranyapura Subdivision, BBMP, Bangalore. |
| AGENCY | **M/s. Sri Ekadantha Constructions,** Bangalore. |
| NAME OF THE WORK | Providing metalling nad asphalting to C.Krishnapp Layout and Kempanna Layout in Ward No.10, BBMP, Bangalore. |
| REFERENCE | AEE/VP/WO/358/2012-13 Dated: 05.03.2013 |
| SAMPLE I/D | Roads in C.Krishnapp Layout & Kempanna Layout in Ward No.10. |
| DATE OF TESTING | 16.03.2013 |

### BITUMEN CONTENT DETERMINATION

| Description | Trail 1 | Trail 2 |
|---|---|---|
| 1. Weight of Mixture before Test, g | 500 | 500 |
| 2. Weight of Mixture after Test, g | 474.5 | 475 |
| 3. Weight of Asphalt and Mineral matter Extracted, g | - | - |
| 4. Weight of Mineral Matter, g. | - | - |
| 5. Weight of Ash, g | | |
| 6. Weight of Bitumen Extracted, g. (corrected) | 25.5 | 25.00 |
| 7. Bitumen content in % | 5.10 | 5.00 |
| 8. Average | **5.05** | |

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Job No.: CTCE/BBMP/W.No.10/SEC/SDBC/GR/2012-13 16.03.2013

## BITUMEN CONTENT AFTER GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

### AASHTO T 164 & AASHTO T 30

| | |
|---|---|
| CLIENT | **Asst. Executive Engineer,** Vidyaranyapura Subdivision, BBMP, |
| AGENCY | **M/s. Sri Ekadantha Constructions,** Bangalore. |
| NAME OF THE WORK | Providing metalling nad asphalting to C.Krishnapp Layout and Kempanna Layout in Ward No.10, BBMP, Bangalore. |
| REFERENCE | AEE/VP/WO/358/2012-13 Dated: 05.03.2013 |
| SAMPLE I/D | Roads in C.Krishnapp Layout & Kempanna Layout in Ward No.10. |
| DATE OF TESTING | 16.03.2013 |

**GRADATION AFTER EXTRACTION**

| Sieve Size in mm | Trail 1 | | | | Specified Limits as per MORTH specification table 500-4 (Grading-2) |
|---|---|---|---|---|---|
| | Weight Retained, gm | % Retained | %Cummulative Retained | % Passing | |
| 13.2 | 0 | 0 | 0 | 100 | 100 |
| 9.5 | 20.5 | 4.32 | 4.32 | 95.68 | 90-100 |
| 4.75 | 265 | 55.85 | 60.17 | 39.83 | 35-51 |
| 2.36 | 55.2 | 11.63 | 71.80 | 28.20 | 24-39 |
| 1.18 | 42.2 | 8.89 | 80.70 | 19.30 | 15-30 |
| 0.3 | 35.8 | 7.54 | 88.24 | 11.76 | 9-19 |
| 0.075 | 28.5 | 6.01 | 94.25 | 5.75 | 3-8 |

| Sieve Size in mm | Trail 2 | | | | Specified Limits as per MORTH specification table 500-4 (Grading-2) |
|---|---|---|---|---|---|
| | Weight Retained, gm | % Retained | %Cummulative Retained | % Passing | |
| 13.2 | 0 | 0 | 0 | 100 | 100 |
| 9.5 | 30.9 | 6.51 | 6.51 | 93.49 | 90-100 |
| 4.75 | 262 | 55.16 | 61.66 | 38.34 | 35-51 |
| 2.36 | 51.2 | 10.78 | 72.44 | 27.56 | 24-39 |
| 1.18 | 30.5 | 6.42 | 78.86 | 21.14 | 15-30 |
| 0.3 | 24.8 | 5.22 | 84.08 | 15.92 | 9-19 |
| 0.075 | 39 | 8.21 | 92.29 | 7.71 | 3-8 |

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